

ENGINEERING YOUR ONLINE REPUTATION

Regard your good name as the richest jewel you can possibly be possessed of—for credit is like fire; when once you have kindled it you may easily preserve it, but if you once extinguish it, you will find it an arduous task to rekindle it again. The way to a good reputation is to endeavor to be what you desire to appear.

—Socrates (circa 469 BCE–399 BCE), Greek Philosopher

INTRODUCTION TO SOCIAL MEDIA MANAGEMENT

Can you remember a time when we did not have the Internet? Some of us can remember when we had to rely upon the story or message that a business placed in its newspaper advertisement. We may have seen a TV ad that embellished the “facts” about a product, but we had no way of knowing if those words were true.

Have you ever stood at the fax machine and impatiently waited for your 12 pages to go through successfully? What about playing phone tag with an integral part of your engineering team? Not too long ago, engineers had to fly to meetings, stay in hotels, put up with unintelligible conference calling systems, be away from their families, and hope that the important people made it to the same meeting.

In 2012, the McKinsey Global Institute released a study entitled *Unleashing Value and Productivity Through Social Technologies*, where it is estimated that social media could add \$1.3 trillion to the economy in the next six years. Of special note were the fields of automotive, mechanical, and aerospace engineering. The author of the article,

Quentin Hardy, states that “since they work with a lot of autonomy, but also in consultation with others, [engineers] benefit the most from knowing such things as which employees have the deepest knowledge in certain subjects, or who last contributed to a project, and how to get in touch with them quickly.”¹

Typically, engineering positions are a collaborative-type of work environment and their communication efforts do not function well using the “one-way street” model anymore. Now that social interaction venues are prevalent in the workplace, there is no turning back to the old way of thinking—relying on word-of-mouth or believing the company line. Employees and employers are diligently working proactively to be informed, stay informed, and share vitally important data with others in worldwide collaborations that bring startling results.

Of course, TV ads still scream as we passively sit on our couches and soak in the information. And, consumers still largely base their opinions on the story that they are told by whoever paid for the newspaper, television, magazine, or radio advertisement. Some of that one-way information model will never be obsolete.

Historically, employees believed what they were told, and interacting with other divisions within the same organization, or affiliate organizations was seen as somewhat traitorous. Social media platforms change all that. “The proper use of social media tools adds to productivity, an improved consumer focus as well as better-functioning teams. Data and knowledge are exposed and shared instead of being hoarded,” says Michael Chui, one of the authors of the McKinsey report.

ENTERING THE INTERNET AGE

The Internet has brought a virtual tidal wave of new possibilities, ideas, and methods that engineers can use for communicating to the world and has blown the one-way communication model to smithereens. The most profound change is that social media, and the messages contained therein, are not owned by any business or organization. Social media are owned by all of us. Engineers collaborating on one project, from all over the world or in the next cubicle is what it is all about!

In her book, *The Zen of Social Media Marketing*, Shama Kabani states that social media consists of “multiple online mediums all controlled by the people participating within them—people who are busy having conversations, sharing resources, and forming their own communities. Unlike radio, television, and print, it isn’t passive—users don’t just receive content; they create it, too.”²

There is one element that historical marketing and social media campaigns have in common. Both methods are designed to get consumers to *take some kind of action*. Businesses still design and implement advertising campaigns to encourage consumers to take action. The Internet provides a broader platform for engineering businesses and

¹Source: <http://bits.blogs.nytimes.com/2012/07/25/mckinsey-says-social-media-adds-1-3-trillion-to-the-economy>

²Kabani, Shama, *The Zen of Social Media Marketing*, Dallas, TX: Ben Bella Books, 2012.

organizations to promote their wares by leveraging a well-defined, strategically planned, and open communication style that encourages online communities (composed of consumers) to contribute to the message and branding of the product or service.

What the Internet and social media channels bring to the old marketing equation is that consumers have stepped into the massively important role of using their own voice to encourage or *discourage* other consumers to take action. Consumers use their positive or negative experiences to influence other consumers; this process is a powerful component of social media communities.

CONQUERING YOUR FEARS OF SOCIAL MEDIA

Social media has become a source of fear and confusion for many. As with anything new, there are fear-mongers and critics. There are also champions and evangelists. This new method of communication can be wildly successful for engineering businesses, or it can be an abysmal failure.

This chapter should dispel some of the confusion associated with using social media to promote yourself or your business. You will find a social media venue that fits your needs. Discussed in the following pages are five of the most widely used social venues, including WordPress blogs, Facebook, Twitter, LinkedIn, and Google+.

Some experts believe that having no online presence is tantamount to having a *bad* online reputation. Have you ever read a bad review of a restaurant online and then decided not to go? What would you do if that restaurant's manager had responded to the bad review and helped the disgruntled customer? Would you give the restaurant a second chance? Most of us would. This is one way that social media can benefit businesses.

But social media is not just for entertainment. *Information Week Security* performed a survey of 1,153 engineers in 2010 and found that, “of those who work in the aerospace, automotive, and commercial-vehicle industries, 55% of respondents said they use social media sites for work-related reasons, and that over half are allowed access while at work.”³

Social media is not a get-rich-quick scheme, and it does not transform your life or engineering business overnight. It is, however, necessary for success in today's digital world.

An umbrella that charges a smart phone?

Vodafone's Booster Brolly is an umbrella that uses on-board solar cells and a micro antenna to charge your phone and boost its 3G signal. Engineering students at University College of London worked with Vodafone to develop this cool technology.

For details, see the Preface for the URL.

³“Engineers Use Social Media for Business.” Information Week Security.
www.informationweek.com/news/security/management/225900054

CREATING A WORDPRESS BLOG

Chances are that you have read an engineering blog within the past month. You may have visited that blog on purpose, you may have stumbled upon it by accident, or you may have landed on the blog and never knew that it was a “blog.”

UNDERSTANDING WHAT A BLOG IS

A “web log,” or “blog” for short, is a specific type of website that is interactive. The site is *supposed* to be updated frequently with new articles and information about specific topics. Blogs contain information from lots of different sources. For example, blogs’ owners (called “bloggers”) can write articles themselves, or they can post articles that they found on other websites. The information can also originate in print, or it can be contributed by the readers of the blog.

That is it. There is nothing mysterious about a blog. There are CEO blogs, celebrity blogs, food blogs, travel blogs, graphic design blogs, architecture blogs and *engineering blogs*. Actually, there are too many types of blogs to list. The most important thing to remember about a blog is that it is interactive and should be constantly changing. This characteristic benefits both the reader and the blogger.

PARTICIPATING IN A BLOG

By viewing and participating in a blog, engineers can be educated, drawn in to a worthwhile conversation, join an online community of like-minded people, help build a branding strategy, shape ideas by giving their opinion, or give advice to product designers. Therefore, readers benefit by receiving information, ideas, or the chance to get their opinion out there.

No matter what the reason is for creating the blog, the blog’s creator must remember that the blog reader is a partner in the success of that blog. Perhaps some bloggers want to become engineering experts in the “Bending Moment.” If that is the case, their blogs will reflect their expertise in the elements involved in the Bending Moment. Those bloggers would use titles and searchable keywords to funnel traffic to their blog about the Bending Moment. This will allow the engineering blog to be found by those who are searching for this topic.

USING A BLOG FOR PROFESSIONAL ADVANTAGE

Engineers often use their blogs as a means of collaboration and networking within their field. Blogs are an excellent platform to give and receive advice and expertise from others engineers in your field. Who knows—you may end up getting an engineering job from a blogging contact! For example, a small group of engineers has created a

blog and the tagline for their site is “Engineers writing about the workplace, common engineering problems, and lessons to share with the world.”⁴

Here is an example of using a blog to build a reputation as an engineering expert:

1. Blogger A (an engineer) needs advice from experts about a faulty modeling process. He finds several blogs that discuss this topic, and he poses some questions on the blogs. By posting his question on a well-known blog, he increases the visibility of his own blog.
2. Blogger B, an engineering expert in the area of faulty modeling processes, sees the post (by Blogger A). Because she is trying to build her online reputation as an expert in faulty modeling processes, she posts a reply to Blogger A’s question. She has just “advertised” to the world that she is an expert in faulty modeling processes.
3. After several online (and highly visible) conversations, Blogger A takes the advice of Blogger B. He follows the steps advised by Blogger B, and the issue with the faulty modeling process is resolved!
4. Blogger A thanks Blogger B (again, online for all to see) for the great advice and tells her that her advice resolved his issue. Blogger A looks good to his clients or employer because he resolved the faulty modeling issue.
5. Blogger B has furthered her efforts at building her reputation as an expert in faulty modeling processes. Her advice contributed to a real-life project.
6. Six months later, a person (prospective new client) conducts a search about “faulty modeling process.” The related engineering blog comes up in the search because Blogger A’s and Blogger B’s posts used searchable keywords. The person sees both sides of the conversation on the blog and sees that Blogger B resolved the issue for Blogger A. The person sees Blogger B as an *expert* and contacts her to help resolve a similar issue.
7. Blogger B scores some new business because of her online reputation!

In the above example, all the engineers win via the use of this blog. Blogging brings people together even if they live in three different countries and never meet each other in person.

See www.electricalengineeringonline.net/engineering-blogs for a list of the 50 top *engineering blogs* found on the Internet.

CHOOSING YOUR BLOG SOFTWARE

Engineering students and professionals alike can benefit from creating their own blogs. You might think that the example about Blogger A and B was make-believe. Fortunately for you and other professional engineers throughout the world, the scenario happens every day. The sky is the limit when it comes to the usefulness of blogging for engineers.

⁴Source: www.engineeringblogs.org

Currently, the most user-friendly and intuitive blogging software available is WordPress. Visit its site at: <http://wordpress.org>

WordPress has some excellent characteristics:

- It can be used to set up a free blog, although you can set up a custom URL for as little as \$17 per year.
- It does not require a single bit of programming knowledge.
- It comes with countless tutorials and technical support.
- It can be used for e-commerce by adding a shopping cart just in case you ever decide to monetize all of your expertise!
- It can be updated or reorganized easily by a complete novice.
- It offers almost limitless graphic themes to promote yourself as an individual or for your company brand, including custom colors, layouts, widgets, and graphics.
- It provides constant updates for free.

EXPLORING ENGINEERING BLOGS

If you are to understand blogging, you will have to visit a few. To find blogs that are relevant to engineering, it is as simple as typing “engineering blog” into any search field.

There are websites that rank the best engineering blogs on the Internet, too. That is the best place to start your search. For example, type the following in to your browser: www.invesp.com/blog-rank/Engineering

Once you see the list of the top 25 engineering blogs, choose several to view. While you are viewing each blog, consider the following:

- Is the blog visually attractive or distracting?
- Is the content relevant and up-to-date?
- Is it easy to see what specific areas are discussed on this blog?
- Is there an easy way to interact with the blog’s creator?
- If needed, does the blog provide evidence of professional engineering clout?

After reading a few blogs, you will begin to understand the differences in style, content, and professionalism. You will also see the big difference between a traditional information-only website and the interactivity of a blog.

Remember, the main point to keep in mind is that a blog gives you the ability to interact with the blogger and others who view the blog. When thinking about designing your blog, make sure that the conversational style, community feel, and content are all open and inviting.

Turning body heat into energy?

Now there is a new source of power that could be put to use; human body heat. Engineers in Stockholm are the first to use the body heat of 250,000 daily commuters in one train station to heat a building next door. Wow.

For details, see the Preface for the URL.

You can visit my blog at: <http://jillbrockmann.com>

What will you write about on your blog? Visit the companion website to see step-by-step instructions for designing and implementing your own blog. (See the Preface for the URL.)

BUILDING A FACEBOOK PAGE FOR A BUSINESS

If you have never heard of Facebook, then you have probably been living under a rock.

Here are some factoids about Facebook's worldwide reach:

- Facebook is used by 70% of automotive and aerospace engineers to exchange information on technical issues, according to a survey of SAE International.⁵
- Facebook had over one billion monthly active users at the end of December 2012.
- On average, it had 526 million daily active users.
- In March 2012, there were 488 million monthly active users who used Facebook mobile applications.
- Facebook had more than 600 million mobile monthly active users as of December 5, 2012.
- During December 2012, on average 500 million users were active with Facebook on at least six out of the last seven days.⁶

HARNESSING THE POWER OF FACEBOOK

If you were offered a customized advertising campaign for your engineering business—and it promised to reach millions of people, worldwide for *free*—would you bite? What if you were offered unlimited access to a panel of 10,000 civil engineering experts (from all over the world) that could help you unravel an issue with a traffic pattern—again, all for *free*?

Consider this:

Did you know that every single person who interacts with your company or organization via social media inadvertently becomes your cheerleader or critic? You may have heard the old adage that if you like a business, you will tell three people. If you *don't* like it, you will tell ten people.

This phenomenon is what makes applications like Facebook such great venues for engineers. Originally, Facebook was created to allow college students to connect

⁵Source: www.informationweek.com/news/security/management/225900054

⁶Facebook statistics, <http://newsroom.fb.com/content/default.aspx?NewsAreaId=22>

and share ideas, stories, events, and generally “socialize.” Now, people from all over the world and from all professions use Facebook in order to share information, be heard, and make connections. Instead of verbally telling ten people they didn’t like a business, they are telling millions of people via Facebook. Instead of having one or two aeronautical engineering experts to consult with, there are now thousands of them at their fingertips.

For example, a Facebook page called “Interesting Engineering” has almost half a million followers. Figure 12-1 shows a screenshot of what the home page looks like. You can find this site by typing in the following URL in your browser: www.facebook.com/interestingengineering

Interesting Engineering’s Facebook page says, “If engineering is a headache for you, join us. We will change the way you feel.”⁷ How cool is that? They are using Facebook to demystify engineering and target a younger audience.

As of this writing, the Facebook page in Figure 12-1 has 489,000 individual “likers,” and 337,060 people are talking about the content (a “liker” is an individual that has subscribed to the news posted on this Facebook page). This is an example of how Facebook creates a community of like-minded people who share an interest in engineering, opinions, and ideas. The people in this community can connect, share ideas, vent their frustrations, seek advice, talk about their successes, post project ideas, and discuss all kinds of engineering-related subjects.



Figure 12-1 Facebook business page or fan page named “Interesting Engineering.”
Source: www.facebook.com/interestingengineering

⁷Source: www.facebook.com/interestingengineering/info

Here is an example of how engineering students and professionals can harness the power of Facebook:

1. An engineering student is lurking around a classmate's Facebook page and sees that her classmate has "liked" a page titled "Interesting Engineering." She decides to click the live link and visit that page.
2. As she scrolls through the engineering-related articles and posts, she stumbles across an article that discusses the subject of her thesis, wind turbine grid development.
3. The student reads the article and scrolls through the reader comments posted. One of the participants, an engineering expert in the topic, has an unusual opinion about wind turbines. The student clicks on the expert's name and immediately lands on the expert's Facebook page.
4. The expert's Facebook page has an About section that lists an email address, phone number, website, blog address, professional associations, education details, and current employer information. The student emails the expert to ask for a telephone interview in order to get some quotes for her thesis.
5. The expert writes back, agrees to the interview, and schedules it for two days hence.
6. Two days later, she gets her interview and obtains valuable information from a well-known engineering industry expert. It adds immeasurably to the content of her thesis.
7. The expert is so impressed with the passion and insight of the student, he offers her an internship that turns in to a full-time engineering position after she graduates.

In the above example, both the engineering student and the expert benefit from the connection they made via Facebook. This type of collaborative connection and sharing happens every day on Facebook. Let us not forget that all of this interaction, conversation, learning, and community building happens all across the world, seven days a week, 24-hours per day—for *free*.

USING FACEBOOK TO BUILD YOUR BRAND

You can use three methods to create your online presence (also referred to as your "brand") and display information on Facebook. Luckily, Facebook provides step-by-step instructions to help you create profiles that can be customized to spotlight engineering professionals.

Note Remember that every friend made, page liked, photograph posted, group joined, event created, or comment left is a reflection of who we are or who we want the world to perceive us as being. If you are creating your social media presence to reflect your engineering business, choose your moves carefully. Visit the companion website to see step-by-step instructions for designing and implementing your customized Facebook page.

The three ways to create a profile on Facebook that presents your engineering business are as follows:

1. **Individual profile.** This is referred to as the “human being” profile. It is for an individual person, *not* a business. Anyone with an email address can build one of these pages. An example of an individual Facebook page is shown below in Figure 12-2.
2. **Fan page.** This is also referred to as a “business page”: it could be for a product, service, organization, club, politician, or any other business-related entity. In order to create this page, you have to have an *individual profile* first. See Figures 12-3 and 12-4 for an example of a fan page for the engineering company, Structures, PE, LLP.

A Facebook fan page comes with some useful features for businesses. One feature is a “People” page. This allows businesses to create a page that shows off the expertise or specialization of their employees. Figure 12-4 shows an example of the engineers at Structures PE, LLP.

3. **Individual fan page.** This type of page is a hybrid. It is just like the “business page,” but it is used for an individual who is an engineering professional. In order to create this page, you have to have an *individual profile* first.

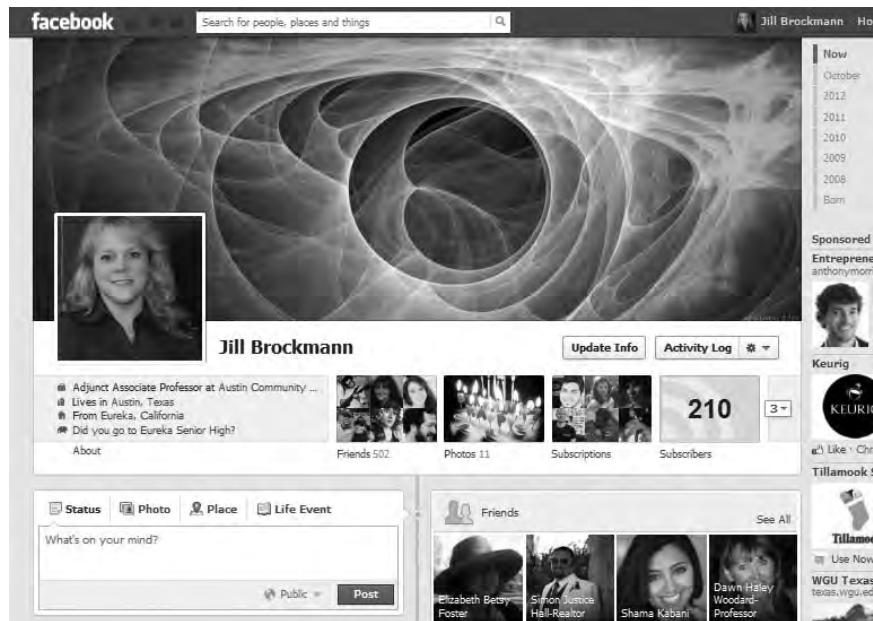


Figure 12-2 Individual Facebook page for Jill Brockmann.

Source: www.facebook.com/jillbrockmann



Figure 12-3 Structures Fan Page on Facebook.
 Source: www.facebook.com/Structures, PE, LLP.

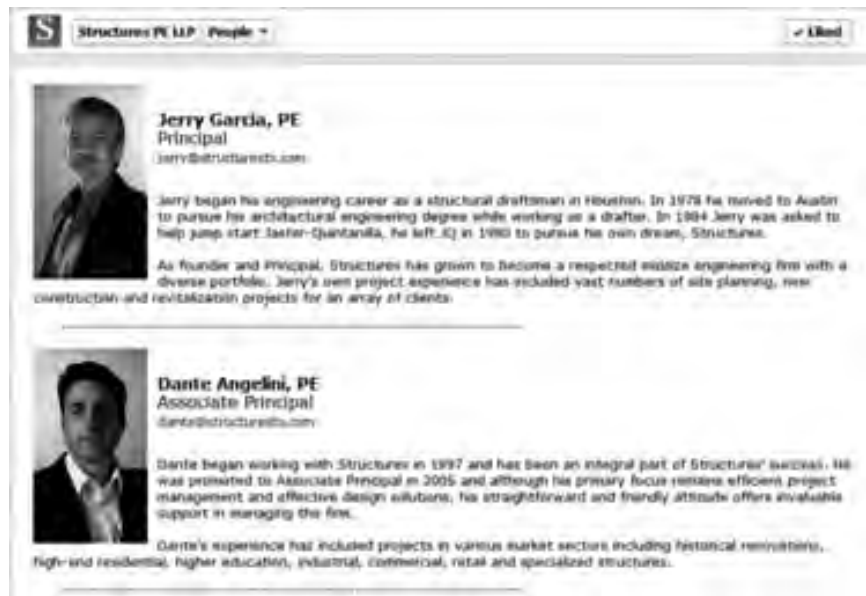


Figure 12-4 Structures PE, LLPs People page on Facebook.
 Source: www.facebook.com/StructuresPE/app_7146470109

For example, an individual engineer may have two Facebook pages:

- One page for his or her *private life*. This *individual* page includes family, friends, hobbies, political views, music preferences, jokes, religious affiliations, and vacation photos. This page is fun, relaxed, family-oriented, personal, and private.
- The other page lists the person's name as the *business name*, and it contains professional and engineering-related information only. This *fan page* is created to promote the person's engineering expertise or specializations. This page contains no personal attributes that could be controversial such as political or religious views. This page is strictly a method of promoting one's engineering expertise on Facebook.

The advantage of creating a Facebook fan page is that you can see demographic data about the people visiting your page. You do this by analyzing Facebook traffic using a tool called “Insights.” It enables you as the page owner to plan successful content and interactions. Again, Facebook provides all of this data free of charge to business (fan) pages. Visit the companion website to see instructions about how you can use the Insights data to make your Facebook fan page more attractive to readers. (See the Preface for the URL.)

The image shown in Figure 12-5 is an example of what one of the Insights pages looks like.



Figure 12-5 Facebook Insights demographic page for Business and Technical Communication at Austin Community College.

Source: www.facebook.com/BTCMACC

When creating and building your brand via a Facebook page, consider the following:

- Will you create a personal page and a professional page?
- How can you spotlight your field of engineering?
- Can you visualize how you could use the commenting functions available on Facebook to gain credibility and become known as an expert in your engineering specialization? For example, when you comment on articles found on Interesting Engineering's Facebook page, you will be seen by half a million people.
- How will you make the design of your Facebook page look consistent with your blog, website and other social media platforms?
- Subscribe to me on Facebook: www.facebook.com/jillbrockmann for tips and tricks about using Facebook pages to promote your personal brand online.

Visit the companion website to see step-by-step instructions for designing and implementing your very own Facebook pages. (See the Preface for the URL.)

***Want to live forever?
Wait until 2045.***

Dmitry Itskov, a wealthy Russian, is creating "Avatar." First, he will transplant human brains into robots and then reverse-engineer the brain to effectively "download" human consciousness onto a computer chip. He estimates that by 2045 humans can buy immortality.

For details, see the Preface for the URL.

USING TWITTER TO CONNECT AND SHARE INFORMATION

If you have never heard of Twitter, then you have probably been living under another rock.

Here are some interesting facts about Twitter:

- Many engineering companies, large and small, now use Twitter to communicate with existing and potential customers. Also, many professional engineering publications post the latest news and links to their online articles on Twitter.⁸
- Even though it is a young social media venue, it has 500 million registered users daily, and 33 billion tweets sent worldwide—*daily*.⁹
- Anyone can read, write, share, or re-share messages about a field of interest, as long as the message is 140 characters or less.

⁸Source: <http://blog.prosig.com/2011/02/24/how-can-social-networks-help-engineers/>

⁹Twitter Facts and Stats, by Bran Friedman, March 14, 2012. Source: <http://socialmediatoday.com/bradfriedman/469107/twitter-facts-and-stats>

- “Tweets,” or typed messages, are posted in real-time and can be read by anyone, from anywhere, regardless of whether they are logged in to their Twitter account.
- Twitter is fast becoming the “go to” medium for engineering information, according to Bosch Rexroth, cited below.

After launching a pilot project to study how engineers used social media, Kevin Gingerich from Bosch Rexroth (see Figure 12-6) stated, “We were astonished by the vibrancy of the engineering and industry communities on *Twitter*. It’s become our engine of choice for communicating to a broad audience, from recent innovations and upcoming exhibitions to new technical references on our website.”¹⁰

USING TWITTER TO CONNECT WITH OTHER ENGINEERS

Why should you or your business join those who swear by Twitter for connecting to others in the engineering field? Here are a few reasons:

- If you are interested in spreading the word about your own engineering expertise or the specialty of your company, why would you ignore a virtual database of opinions, trends, messages, stories, and networking opportunities?
- In the engineering context, Twitter is an environment that is rich with ideas, conversations, and content from influential industry leaders. Don’t forget that



Figure 12-6 Twitter account home page for Bosch Rexroth Corporation.
 Source: <http://twitter.com/boschrexrothus>

¹⁰Machine Design.com. Twitter for Engineers. Source: <http://machinedesign.com/article/twitter-for-engineers-can-social-media-play-a-role-in-the-design-community-0302>

all of this sharing, communicating, and brand-building activity is available 365 days a year, 24 hours per day—for *free*.

Figure 12-6 is an image of a successful engineering home page on Twitter.

Businesses can use Twitter # (hashtags) to corral participants at a company-sponsored event, for curating crowd-sourced data about product research, and for connecting directly with engineering clients and customers. More information about the importance of hashtags and crowd-sourcing data can be found on the companion website. See the Preface for the URL.

- Engineering professionals can use Twitter to funnel traffic to special events, online design contests, interactive websites, new blog entries, product launches, and other information-rich connections with consumers.
- Individual engineers can use Twitter to foster strong networking relationships with other engineers by listening and gathering industry intelligence about competition, market trends, and employment opportunities.

Imagine you are a graduating engineering student; here's how you can use Twitter:

1. You are about to graduate from a small college with a mechanical engineering degree and have arrived at the International Manufacturing Technology Show (IMTS) 2012 in Chicago. You are to visit the booth of the internationally known company that paid for your flight, hotel, and admission to this event. You have been told that it is located in Booth #10602. Only, they are not actually at that location. No other information is available. Hmm. What to do?
2. Enormous Engineering Company (EEC), the company that paid for your dream trip, had to move its booth to a different building because of mechanical "issues" with Booth #10602. EEC is worried that attendees will not be aware of its last-minute location change. The company tweets immediately about its new building location at IMTS.
3. You are following EEC on Twitter. You quickly scroll through your tweet feed to see if there is any word from them. Bingo! They have moved to a different building three blocks away.
4. You inspire and amaze EEC's booth members by arriving early to express your hearty thanks for the great trip, and you make sure that their mechanical issue is fixed at the new location. They are grateful for your arrival at the new location and glad that Twitter helped route you to the new location.
5. Upon returning home from your trip you find a letter from the president of EEC, thanking you for your help with the booth and inviting you to dinner to talk about your plans for after graduation.

In the above example, Twitter moved mountains for you and EEC. When a company invests thousands of dollars setting up plans for an enormous event like IMTS, it can be derailed quickly by a sudden event like changing a booth location. Since Twitter is known for instantaneous communication, it is a perfect platform for this occurrence. EEC could have missed a few thousand booth visitors, and you may not have found them to say "thank you" for your trip. You would have missed the free dinner invitation, too.

CUSTOMIZING YOUR TWITTER ACCOUNT

When creating the account for you or your engineering organization on Twitter, consider the following:

- Make sure others can find you easily on Twitter. Customize your Twitter user name, profile photo and design, bio, and online appearance by maintaining brand consistency with colors, images, and logos. Use keywords in your bio to help people find you.
- Don't worry about how many followers *you* have. Instead, concentrate on following engineering industry leaders, cutting-edge companies, and experts in engineering. Read their tweets, place comments, re-tweet them, and actively seek information that will bring you new information and ideas. Your own followers will come eventually.
- Use customized searches and hashtags to filter out everything except the information you need.
- Attach hashtags to photos or videos you upload so they are easily found in searches. Remember to use authentic keywords whenever possible.
- To find people, companies or engineering organizations to follow, use **Twellow.com** and **WeFollow.com** directories on Twitter that are categorized by interest and industry.

Follow me on Twitter:

@JillBrockmann

Who will you follow on Twitter? How will you manage the information and communications you receive on Twitter? To get answers to these questions and others, visit the companion website to see step-by-step instructions for designing and implementing your very own Twitter account. (See the Preface for the URL.)

Does adding sound to cars increase safety?

Engineers have developed a vehicle warning system that improves safety for bicyclists. The system consists of a GPS-enabled device mounted to the dashboard of an electric car (which are dangerously quiet). It warns bicyclists of the approach of a quiet car.

For details, see the Preface for the URL.

GENERATING YOUR INTERACTIVE RÉSUMÉ ON LINKEDIN

In a recent *Wall Street Journal* article titled “No More Résumés,” Rachel Emma Silverman stated that “Instead of asking for résumés, a New York venture-capital firm—which has invested in Twitter—asked applicants to send links representing their ‘Web presence.’”¹¹ What? No résumé?

¹¹Rachel Emma Silverman, “No More Résumés,” *Wall Street Journal*, January 24, 2012.

Source: <http://online.wsj.com/article/SB10001424052970203750404577173031991814896.html>

Tech-savvy employers are acquiring evidence of people's web reputation and searching for their online interactions as a means of finding better-quality candidates—especially for engineering companies or organizations that rely heavily in the Internet and social media to build their brand, enhance employee collaboration, and reach their customer base.

INCREASING VISIBILITY FOR ENGINEERS

When it comes to actively participating in various social media platforms, the Society of Automotive Engineers International (SAEI) has determined that “engineers are apparently just as hip as the rest of us.” SAEI has drawn this conclusion after completing a survey that revealed 61% of engineers polled use social media sites like Facebook, LinkedIn, Twitter, and YouTube.¹²

LinkedIn is the perfect place to increase online visibility, showcase your engineering expertise, and network with other professionals in your field. Even though LinkedIn is considered a “social” media site, the purpose of creating and maintaining a profile on this platform is solely for professional networking, connecting, and building career-oriented associations.

Figure 12-7 shows a typical LinkedIn profile of engineer, author, and speaker Anthony Fasano, PE, LEED, AP.

Completing your LinkedIn profile can be time-consuming, but the benefits are enormous. The tools provided allow space to include all phases of your professional life including your work experience, education, business associations, personal and company websites, other social media accounts, volunteer activities, areas of special expertise using keywords, and other ways to enhance your professional message to other LinkedIn members.

CREATING YOUR LINKEDIN PROFILE

When creating your profile on LinkedIn, consider the following:

- **Complete your entire profile.** A sparsely completed profile is almost as bad as having no profile at all. Your profile should be compelling, interesting, accurate, and complete. Include as much engineering-related information as possible. Remember to use keywords.
- **Actively participate in LinkedIn Answers.** The answers feature helps nurture professional engineering connections and gives you a chance to show your expertise by answering questions posed by others. Participate by posing questions yourself, too.
- **Join groups.** Find groups related to the engineering profession, join them, and actively participate in ongoing conversations to get your name seen in the forums. If there are not any groups about your specific area of engineering, create one!

¹²“Mobility Engineers Big Users of Social Media.” Society of Automotive Engineers International.
Source: WWW.SAE.ORG/JSP/JSPP/MKTWHITEPAPERFORM.JSP?PUBL=SOCIAL

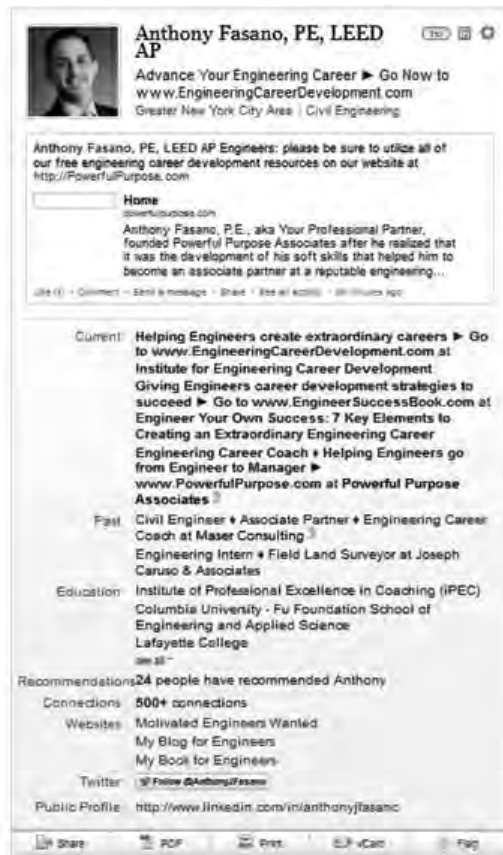


Figure 12-7 LinkedIn profile home page for Anthony Fasano, PE, LEED, AP.

Source: www.linkedin.com/in/anthonyjfasano

- **Use Advanced Search.** The basic search function is great, but Advanced Search has all sorts of ways to fine-tune your results, including engineering keywords and product names in all your posts.
- **Treat your LinkedIn profile similar to a website.** Make sure your profile is up-to-date, organized, well-formatted and contains lots of interesting engineering-related information. It goes without saying that misspellings are a no-no!
- **Populate your profile with keywords.** Use keywords that reflect your background, education, professional field, or expertise. Use variations of those words, too: for example, use engineer, engineering, engineered.
- **Increase the chances you will be found with search engines.** Make sure that your profile is marked as “public” so that you will show up in searches for your profession.

GIVING AND RECEIVING RECOMMENDATIONS

One of the best features offered to LinkedIn members is the Recommendation section. This is a profile portion designed to highlight your achievements and the exceptional work of other LinkedIn members.

You may politely ask an engineering colleague for a recommendation for any collaborative work you performed. You may receive a request for a recommendation from another LinkedIn member.

People in charge of making hiring decisions commonly review LinkedIn profile pages. It is important that you request recommendations that are relevant to your engineering specialty. Make the most of the section by requesting recommendations from colleagues you have collaborated with and by giving accurate and detailed recommendations to those colleagues you feel should be spotlighted. Figure 12-8 shows an example of the engineering recommendations section on the home page of an engineer's LinkedIn profile.

First algae-powered car?

The world's first algae fuel-powered vehicle, dubbed the Algaeus, was revealed in San Francisco. The plug-in hybrid car, which is a Prius equipped with a nickel metal hydride battery, runs on green algae.

For details, see the Preface for the URL.



Figure 12-8 LinkedIn recommendations profile for Anthony Fasano.

Source: www.linkedin.com/in/anthonyjfasano

Connect with me on LinkedIn: www.linkedin.com/in/jillbrockmann
Visit the companion website to see step-by-step instructions for designing and implementing your very own LinkedIn account. (See the Preface for the URL.)

TARGETING EXPERTS WITH GOOGLE+

Have you ever heard the word “google” used as a verb? Usually people say, “Google it!” That is probably because Google is the largest search engine on the Internet. Wouldn’t it be terrific if your engineering business came up at the top of the list when someone searched, “expert chemical engineer”?

Google+, Google Plus or just g+, is the brain-child of Google, Inc. Google is not just a search engine. It has developed many collaboration-based applications that are widely used throughout the engineering field. In an attempt to gather all of these cutting-edge applications into one place, Google engineers created Google+. This platform integrates many of Google’s products to create a broader social experience. The result is a platform for professionals who want to increase their online visibility and personal brand identity.

Figure 12-9 is an example of the Google+ page for the engineering program at Stanford University.



Figure 12-9 Google+ profile page for Stanford University Engineering program.
Source: <https://plus.google.com/u/0/102383602041872018960/posts>

CREATING YOUR GOOGLE+ PROFILE PAGE

If you do not have a Google+ account yet, it is easy to create. Type the following text in your browser: <http://plus.google.com>

Google+ has an intuitive user interface that walks you through creating your profile in minutes. Visit the companion website to see step-by-step instructions for designing and customizing your own Google+ account. (See the Preface for the URL.)

CIRCLING ENGINEERING EXPERTS

The main functions of Google+ are bundled to include a search engine, an email client, an Internet browser, friend streams, circles of specialized contacts, group video chats with a new feature called Hangouts, personalized and automated search functions, the ability to target engineering industry experts, and the community-building feature called Circles.

The Circles feature of Google+, at first glance, may look the same as “friending” people on Facebook. However, Circles is a much more intricate way to organize lists (circles) of engineering industry experts, colleagues, and friends. The streamlining of these circles of contacts allows you to create entirely separate groups (circles) for family, friends, college alumni, colleagues, civil engineering experts, aeronautic engineers, mechanical engineers, sports fans, and more.

The main point to remember about Google+ Circles is that it allows you to read what you want, share what you want, share it when you want, and share it with whom you want. It also allows you to filter out the noise from everyone in your circles and drill down to reading only the content posted by the engineering experts you choose. This ability to focus on a specific topic is a huge time saver. For example, if you want to read about new developments in wind turbine grid engineering, you simply click the circle (that you created and filled with experts) named “wind turbine experts” and scroll through the posts of those experts.

Figure 12-10 shows an example of a Google+ Circles page.

Creating, adding, deleting, and modifying your Circles is as easy as a click or two. You can also invite people who are in your circles to participate in a live online session called a “Hangout.” These hangouts can be recorded and replayed via YouTube.com. This function enables you to conduct online meetings with others. There is no more flying to meetings. You can sit in your home office in your pajamas! You can join other Hangouts as an active participant or simply observe and listen.

MAXIMIZING YOUR ONLINE VISIBILITY

A useful feature of using Google+ in an engineering business is that your Google+ page content is part of Google’s web search integration and the ability for consumers to “direct connect” to your page. Through this connection ability, consumers or clients are directed to your website or other online venues, such as your blog.

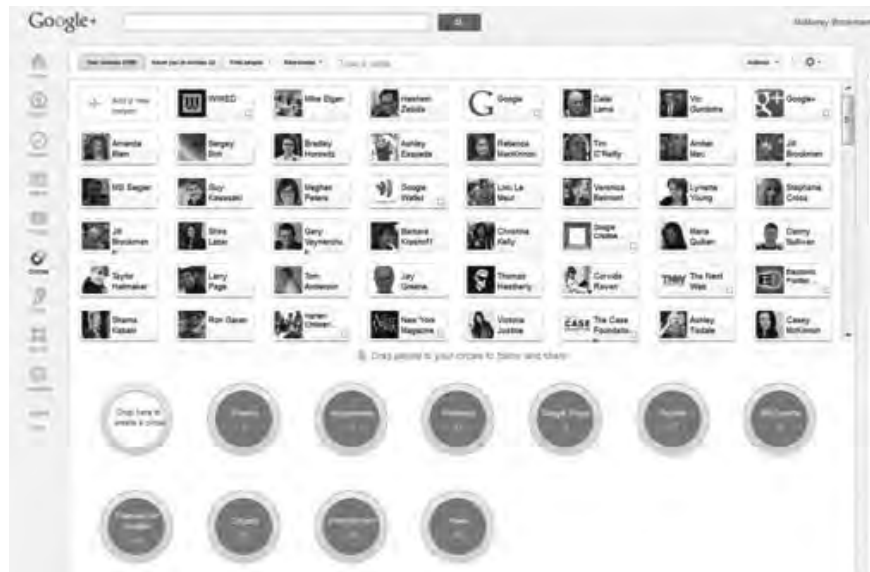


Figure 12-10 Google+ Circles page for McMurrey-Brockmann Educational Resources, LLC.

Source: <https://plus.google.com/McBrockEdu>

Here are some examples of what to think about when creating your Google+ account:

- How will you find and follow industry experts in your field of engineering?
- How will you distinguish yourself from other engineers on Google+?
- How will you gain more visibility and prove your expertise on Google+ by adding new connections?

Add me to your Circles on Google+ at: Jill@Get-ACE.com

Visit the companion website to see step-by-step instructions for designing and implementing your own Google+ account. (See the Preface for the URL.)

To “bug” or “debug”? That’s the question.

In 1947, Harvard University engineering students found the first “computer bug.” They taped the moth in their logbook and labeled it “first actual case of bug being found.” The words “bug” and “debug” soon became mainstays in the language of computer programmers.

For details, see the Preface for the URL.

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